

REMARKS

Applicant is in receipt of the Office Action mailed January 4, 2005. Claims 2, 3, 29, and 30 have been cancelled. Claims 1, 25, 26, 28, 37, and 39-45 have been amended to clarify the claimed invention. Claims 1-45 are pending in the case. Reconsideration of the present case is earnestly requested in light of the following remarks.

Section 102 Rejections

Claims 1-11, and 18-45 were rejected under 35 U.S.C. 102(e) as being anticipated by Limondin et al. (US 6,226,783, hereinafter "Limondin"). Applicant respectfully disagrees.

As the Examiner is certainly aware, anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The identical invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Amended claim 1 recites:

1. A computer-implemented method for creating a graphical program based on a sequence that includes motion control, machine vision, and data acquisition (DAQ) operations, the method comprising:

displaying a graphical user interface (GUI) that provides GUI access to a set of operations, wherein the set of operations includes one or more motion control operations, one or more machine vision operations, and one or more DAQ operations;

receiving user input to the graphical user interface specifying the sequence of operations, wherein the specified sequence of operations includes at least one motion control operation, at least one machine vision operation, and at least one DAQ operation;

storing the specified sequence of operations based on the user input; and

automatically generating a graphical program to implement the specified sequence of operations, wherein said automatically generating the graphical program

comprises generating graphical code in the graphical program without direct user input, and wherein the graphical code comprises a plurality of interconnected nodes which visually indicate the functionality of the graphical program.

The Office Action asserts that Limondin teaches all the limitations of claim 1. However, Applicant notes that Limondin is directed to “A method for creating, describing, editing and distributing user programs, such a digital signal processing programs of the type used in machine vision applications, across multiple processing targets.” (Abstract) More specifically, as also described in the Abstract, in Limondin’s system:

The user program is made up of a series of operations called "steps" that are organized in a hierarchical structure or list and which encapsulate the data necessary for the target processor to optimally execute and program and allows optional editing in a target system native and step specific GUI environment. The user programs generated by the present method are not in a computer language nor are they created by directed programming techniques. Further, they are not interpreted. Rather, the steps include one or more associated step objects that in turn call step agents at the time of step program execution.

Applicant respectfully submits that there are numerous limitations of claim 1 that Limondin fails to teach or suggest. For example, nowhere does Limondin teach or suggest, or even mention, “a graphical program”, nor automatically generating such a graphical program. Applicant submits that the Examiner has improperly equated a graphical program with a machine vision program. As described in the Specification p. 12, lines 9-11, and as recited in amended claim 1, the graphical code (the graphical program) comprises a plurality of interconnected nodes that visually indicate the functionality of the program. Applicant notes that a graphical program may be directed to any type of functional domain, not just “graphics” or “vision” applications.

Applicant further notes that per the above cited Abstract and elsewhere, Limondin is quite clear that the “user programs” disclosed therein are *not in a computer language nor are they interpreted*. Rather, the steps include one or more associated step objects that

in turn call step agents at the time of step program execution. In other words, Limondin's user program is simply a step sequence framework indicates to a step engine executing on the target platform which of various pre-written step programs or agents to call or invoke to actually perform the indicated step.

Thus, Applicant respectfully submits that Limondin nowhere teaches or suggests, or even mentions, a graphical program, nor automatic generation of graphical code for such a program, i.e., without direct user input. Thus, for at least the reasons provided above, Applicant submits that claim 1 and those claims dependent therefrom are patentably distinct and non-obvious over Limondin, and are thus allowable.

Independent claims 25, 26, 28, 37, and 39-45 each include similar features and limitations, and so the above arguments apply with equal force to these claims. Thus, for at least the reasons provide above, Applicant respectfully submits that claims 25, 26, 28, 37, and 39-45, and those claims respectively dependent therefrom, are similarly patentably distinct and non-obvious over Limondin, and are thus allowable.

Removal of the section 102 rejection of claims 1-11, and 18-45 is requested.

Section 103 Rejections

Claims 12-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Limondin in view of McDonald et al. (US 5,966,532, hereinafter "McDonald"). Applicant respectfully disagrees.

First, Applicant reminds the Examiner that if an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), thus Applicant respectfully submits that since independent claim 1 has been shown above to be patentably distinct and non-obvious over the prior art, dependent claims 12-17 are also patentably distinct and non-obvious.

Additionally, to establish a prima facie obviousness of a claimed invention, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981,

180 U.S.P.Q. 580 (C.C.P.A. 1974), MPEP 2143.03. Obviousness cannot be established by combining or modifying the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion or incentive to do so. *In re Bond*, 910 F.2d 81, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

Moreover, as held by the U.S. Court of Appeals for the Federal Circuit in *Ecolchem Inc. v. Southern California Edison Co.*, an obviousness claim that lacks evidence of a suggestion or motivation for one of skill in the art to combine prior art references to produce the claimed invention is defective as hindsight analysis.

In addition, the showing of a suggestion, teaching, or motivation to combine prior teachings “must be clear and particular Broad conclusory statements regarding the teaching of multiple references, standing alone, are not ‘evidence’.” *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). The art must fairly teach or suggest to one to make the specific combination as claimed. That one achieves an improved result by making such a combination is no more than hindsight without an initial suggestion to make the combination.

Applicant respectfully submits that neither Limondin nor McDonald provides a motivation to combine. Nowhere does Limondin suggest or hint at automatic generation of a graphical program, i.e., of generating graphical code without direct user input. In fact, Limondin specifically states that no executable or interpretable program code, i.e., in a programming language, is generated, and thus actually teaches *away* from Applicant’s invention as claimed. Likewise, McDonald neither suggests nor even hints at automatically generating a graphical program based on a user-specified sequence of operations. Rather, McDonald’s generation of a graphical program is based on a user-selected control, i.e., a graphical user-interface control. As McDonald clearly describes in the Abstract,

According to the present invention, the user first selects a control and then preferably initiates the graphical code generation wizard for the control. When the graphical code generation wizard is invoked, the wizard displays on the screen a configuration panel or dialog, prompting the user to configure the control or object. The user then selects parameter values to configure certain aspects of the graphical code being created. The graphical code generation wizard selects a graphical code template in

response to the control and configures the graphical code template with the parameter values. The graphical code generation wizard then creates an association between the control and the configured graphical code.

Thus, McDonald is directed to selection of a graphical code portion or template *based upon a user selected and configured control*. Regarding claim 12, Applicant respectfully submits that the Examiner has attempted to combine Limondin and McDonald via hindsight analysis, using Applicant's claim 12 as a blueprint, and simply citing an alleged improved result as the motivation to combine, which is improper. Thus, Limondin and McDonald are not properly combinable for a 103(a) rejection. Moreover, Applicant submits that even were Limondin and McDonald properly combinable, which Applicant argues they are not, the resulting combination would still not produce Applicant's invention as represented in claim 12.

For example, Applicant submits that Limondin's user program, which was specifically defined as *not* being an executable or interpretable program in a programming language, may not be equated with McDonald's automatically generated graphical program. Similarly, McDonald, whose automatically generated graphical program was specifically defined as being generated *based on a user-selected control*, may not be modified to instead generate or modify the program based on the test sequence of Limondin. Applicant reminds the Examiner that if a proposed modification would render the prior art feature unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900 (Fed. Cir. 1984). Applicant submits that the Examiner's proposed combination necessitates modifications to one or both of the cited references that render the respective systems unsatisfactory for their intended purposes.

Additionally, the Examiner asserts that Limondin and McDonald "are analogous art because they are both directed to generating graphical program based on user inputs specifying data acquisition operations" [sic]. However, as argued above, Limondin is *not* directed to generating a graphical program, and in fact, does not even mention graphical programs or graphical code. Thus, Applicant submits that Limondin is not analogous art, and is not available as prior art for the present case.

Applicant respectfully submits that neither Limondin nor McDonald, taken singly or in combination, teaches or suggests “creating an association between the sequence and the graphical program; modifying the sequence to create a new sequence in response to user input after said creating the association; and modifying the graphical program according to the new sequence to create a new graphical program”.

Thus, for at least the reasons provided above, Applicant submits that claim 12 is patentably distinct and non-obvious over Limondin and McDonald, taken singly or in combination, and is thus allowable.

Removal of the section 103 rejection of claims 12-17 is earnestly requested.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the independent claims have been shown to be patentably distinct, a further discussion of the dependent claims is not necessary at this time.

CONCLUSION

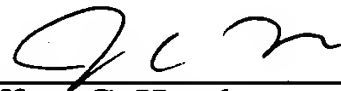
Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert & Goetzel PC Deposit Account No. 50-1505/5150-58300/JCH.

Also enclosed herewith are the following items:

☒ Return Receipt Postcard

Respectfully submitted,



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